

**PROBLEM-SOLVING APPLICATIONS****R 4-9****Building Square**

Peter is building two shelves. One shelf needs to be  $2\frac{1}{2}$  ft long. The other shelf needs to be  $3\frac{2}{5}$  ft long. How much wood will Peter need for these shelves?

Use the LCM to find a common denominator. The LCM of 2 and 5 is 10.

$$\begin{array}{r} 2\frac{1}{2} = 2\frac{5}{10} \\ + 3\frac{2}{5} = 3\frac{4}{10} \\ \hline 5\frac{9}{10} \end{array}$$

So, Peter will need  $5\frac{9}{10}$  ft of wood.

Use the data file to answer the following questions.

**Data File**

Board	Length (in feet)
A	$1\frac{3}{4}$
B	$3\frac{5}{8}$
C	$10\frac{1}{2}$
D	$8\frac{2}{3}$

1. Peter needs four of Board A to make a picture frame. How many total feet of wood is that?

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2. What is the difference in lengths of Board B and Board C?

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3. Peter wants to place a shelf all the way across the wall of his kitchen. The wall is 23 ft long. If Peter uses two of Board C, will he have enough wood to go across the wall? Would you use mental math or paper and pencil to find this answer?

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4. How long would Board B be if Peter cut  $2\frac{1}{2}$  ft. from it? \_\_\_\_\_

5. **Estimation** Peter has five of Board D. About how many feet of wood is that in total?

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